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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,924	03/13/2002	Takuya Matsumoto	2002_0343A	4621

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EXAMINER

KOCH, GEORGE R

ART UNIT

PAPER NUMBER

1734

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,924

Applicant(s)

MATSUMOTO, TAKUYA

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3-13-2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Burtin (US 5,939,993).

Burtin '993 discloses an electrostatic painting device with a transmission frequency adjustment device comprising: a high voltage booster circuit (item 8) provided inside the body of the electrostatic painting device to rectify a high frequency low voltage and generate a DC high voltage for electrostatic painting; a high frequency low

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voltage generator (item 1) provided independently of said electrostatic painting device to generate said high frequency low voltage; a low voltage cable (item 4) connecting the high frequency low voltage generator to the high voltage booster circuit, current sensor means for detecting a current value corresponding to an intrinsic consumed current at the high voltage booster circuit (see column 4, lines 22-37 which disclose the 4 components which measure the current), and frequency control means (item 20) for adjusting a frequency of the high frequency low voltage in such a manner that a current value detected by the current sensor does not exceed a prescribed value (see column 4, lines 38-65).

As to claim 3, Burton '993 discloses that the current sensor means (made up of elements 11 through 14) is provided in the high frequency low voltage generator (item 1) to detect a current supplied to the low voltage cable.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

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1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 1, 2, 6 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (Figure 1 and 2) and Burtin '770 (US Patent 5,703,770).

The admitted prior art in figures 1 and 2 discloses an electrostatic painting device with a transmission frequency adjustment device comprising: a high voltage booster circuit (item 201) provided inside the body of the electrostatic painting device (item 2) to rectify a high frequency low voltage and generate a DC high voltage for electrostatic painting; a high frequency low voltage generator (item 1) provided independently of said electrostatic painting device to generate said high frequency low voltage; a low voltage cable (item 3) connecting the high frequency low voltage generator to the high voltage booster circuit. The admitted prior art does not disclose current sensor means for detecting a current value corresponding to an intrinsic consumed current at the high voltage booster circuit or frequency control means for adjusting a frequency of said high-frequency low voltage in such a manner that a current value detected by the current sensor means does not exceed a prescribed value.

Burtin '770 discloses current sensor means (item 12, see column 3, line 58 to column 4, line 12) for detecting a current value corresponding to an intrinsic consumed current at the high voltage booster circuit and also discloses frequency control means (see column 4, line 6 to column 5, line 9, especially column 4, lines 50-65) for adjusting a frequency of said high-frequency low voltage in such a manner that a current value

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detected by the current sensor means does not exceed a prescribed value. Burton '770 discloses that such a sensor and frequency control means allows for, among other benefits, the extension of the operating time and/or the reduction of electric consumption, which gives economic benefits (see column 4, lines 13-29). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the current sensor and the frequency control means of Burtin '770 in order to improve operating time and electric consumption.

As to claim 2, Burton '770 as incorporated discloses that the frequency control means exercises control to determine a frequency of the high frequency low voltage in such a manner that a current value detected by the current sensor means becomes the smallest (see column 4, lines 1-67).

As to claim 6, the apparatus of the admitted prior art and Burtin '770 discloses that the when a current value detected by the current sensor means exceeds a predetermined value, the frequency control means performing an operation for adjusting a frequency of the high frequency voltage. Furthermore, if the abnormal indication means is interpreted as being the signal that indicates the abnormal current and voltage signals then Burtin '770 as applied above discloses abnormal indication means (see sections cited above, for example, column 3, lines 41-50 and especially column 4, lines 6-12).

Claim 10 is rejected on similar grounds as claim 6 above.

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7. Claims 3-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art and Burtin '770 as applied to claims 1 and 2 above, and further in view of Burtin '993.

The admitted prior art and Burtin '770 are silent as to the location of the current sensor means. One in the art would appreciate that any conventional location was intended.

Burton '993 discloses that the current sensor means (made up of elements 11 through 14) is provided in the high frequency low voltage generator (item 1) to detect a current supplied to the low voltage cable. One in the art would immediately appreciate that such a sensor location close to the frequency control would reduce data degradation between the current sensor means and the frequency control means. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the sensor location of Burton '993 in order to reduce data degradation.

As to claim 4, Burtin '770 as applied discloses that the frequency control means performs an operation for adjusting a frequency the high frequency voltage at various moments. However, the admitted prior art and Burtin '770 do not suggest adjusting the frequency when the power switch of the electrostatic painting device is closed, i.e., at startup.

Burtin '993 discloses adjusting the frequency when the power switch of the electrostatic painting device is closed, i.e., at startup.

As to claim 5, the apparatus of the admitted prior art, Burtin '770, and Burtin '993 is considered capable of adjusting a frequency at set times.

Claim 7 is rejected on similar grounds as claim 3 above.

Claim 8 is rejected on similar grounds as claim 4 above.

Claim 9 is rejected on similar grounds as claim 5 above.

As to claims 11-13, the apparatus of the admitted prior art and Burtin '770 discloses that the when a current value detected by the current sensor means exceeds a predetermined value, the frequency control means performing an operation for adjusting a frequency of the high frequency voltage. Furthermore, if the abnormal indication means is interpreted as being the signal that indicates the abnormal current and voltage signals then Burtin '770 as applied above discloses abnormal indication means (see sections cited above, for example, column 3, lines 41-50 and especially column 4, lines 6-12).

Alternatively as to claims 11-13, and also claims 6 and 10, if the abnormal indication means is interpreted as being the warning indication means (item 113, see page 9 of specification) of the specification and its equivalents, then the admitted prior art and Burtin '770 do not disclose abnormal indication means. However, Burtin '993 discloses that it is known to use such means to alert the operator during the painting process (item 21). One in the art would immediately appreciate that such indication means would allow for corrective action to be taken by the operator. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized such abnormal indication means in order to alert for corrective action.

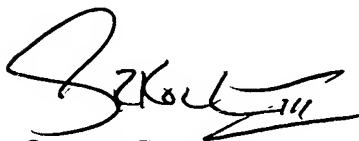
Information Disclosure Statement

8. The information disclosure statement filed May 13th, 2002 lacks an usable copy of two references which have been lined out.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (703) 305-3435 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-800-877-8339 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



George R. Koch III
September 17, 2003



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700